
Estimate Amounts of Cholera Treatment Supplies Needed



Cholera Treatment Supplies

- **Having adequate supplies can save lives**
 - health facilities need rapid access to supplies at the beginning of an epidemic
- **When an epidemic is suspected:**
 - do rapid inventory of treatment supplies available in district
 - order supplies urgently

Cholera Treatment Supplies

Reserve Stock

- **Maintain a reserve stock of supplies that can be used at time of an epidemic**
 - **rotate reserve supplies with usual supplies to avoid expiration**
 - **locate reserve supplies to allow for easy access when needed**
 - **exact location depends on local circumstances**

Cholera Treatment Supplies

Minimum Amount to Treat 100 Patients

- **WHO list estimates the minimum amount of supplies to treat 100 patients during a cholera outbreak**
- **Assume:**
 - **IV fluid followed by ORS for 20 severely dehydrated patients**
 - **ORS for the other 80 patients**

Cholera Treatment Supplies

Minimum Amount to Treat 100 Patients

■ Rehydration Supplies

- 650 packets oral rehydration salts, 1 liter each**
- 120 bags Ringer's lactate solution, 1 liter, with giving sets**
 - may substitute normal saline, if Ringer's lactate not available**
- 10 scalp-vein sets**
- 3 nasogastric tubes, 5.3 mm OD, 3.5 mm ID (16 French), 50 cm long, for adults**
- 3 nasogastric tubes, 2.7 mm OD, 1.5 mm ID (8 French), 38 cm long, for children**

Cholera Treatment Supplies

Minimum Amount to Treat 100 Patients

Antibiotics

■ For adults

- 60 capsules doxycycline, 100 mg**
 - 3 capsules per severely dehydrated patient**
- OR**
- 480 capsules tetracycline, 250 mg**
 - 24 capsules per severely dehydrated patient**

■ For children

- 300 tablets trimethoprim-sulfamethoxazole (TMP 20 mg + SMX 100 mg)**
 - 15 tablets per severely dehydrated patient**

Cholera Treatment Supplies

Minimum Amount to Treat 100 Patients

Other Treatment Supplies

- **2 large water dispensers with tap**
 - marked at 5- and 10- liter levels, for making ORS solution in bulk
- **20 1 liter bottles for ORS solution**
 - (e.g. empty IV bottles)
- **20 1/2 liter bottles for ORS solution**
- **40 tumblers, 200 ml**
- **20 teaspoons**
- **5 kg cotton wool**
- **3 reels adhesive tape**

Treatment Supplies

How to Estimate the Amount that will be Needed

- **Estimate based on the amounts used in previous cholera epidemics**
 - maintain a reserve stock equal to a 1-month stock of supplies

- **Estimate based on predicting the number of cases that might occur**
 - for large populations
 - use attack rate of 0.2%
 - for rural, small populations (<5,000)
 - use attack rate of 2%

Estimate Amount of Supplies Using Attack Rate

- **Step 1**

Multiply population by predicted attack rate

This gives the number of persons who might become ill

- **Step 2**

Divide result of Step 1 by 100

- **Step 3**

Multiply each item on supply list by the result of Step 2.

This gives the amount of each item needed.

Estimate Supplies Needs

Example 1 - Paal District

- **Paal District population = 75,000**
- **Using attack rate of 0.2%**

1. Multiply population by AR

$$\text{- } 75,000 \times 0.002 = 150$$

this is the number of people who may become ill

2. Divide result of Step 1 by 100

$$150 / 100 = 1.5$$

3. Multiply amount of each item on list by 1.5

Estimate Supply Needs

Example 1 - Paal District

- **Amount on list = 650 packets ORS solution**

$$650 \times 1.5 = 975$$

Paal District should order 975 packets of ORS

- **Amount on list = 120 bags Ringer's lactate**

$$120 \times 1.5 = 180$$

Paal District should order 180 bags of Ringer's

- **Amount on list = 3 adult nasogastric tubes**

$$3 \times 1.5 = 4.5$$

The district should order 5 adult NG tubes

- **and so on, for the rest of the list.....**

Estimate Supplies Needs

Example 2 - a small population

- Valta Health Center catchment population = 4,000
- Using attack rate of 2%

1. Multiply population by AR

$$- 4,000 \times 0.02 = 80$$

this is the number of people who may become ill

2. Divide result of Step 1 by 100

$$80 / 100 = 0.8$$

3. Multiply amount of each item on list by 0.8

Cholera Treatment Supplies

Example 2 - a small population

- **Amount on list = 650 packets ORS solution**

$$650 \times 0.8 = 520$$

Valta HC ordered 520 packets of ORS

- **Amount on list = 120 bags Ringer's lactate**

$$120 \times 0.8 = 96$$

They ordered 96 bags of Ringer's lactate

- **Amount on list = 3 adult nasogastric tubes**

$$3 \times 0.8 = 2.4$$

The district should order 3 adult NG tubes

- ▶ ***round up, & if the amount calculated is less than one, order at least one of the item***

Summary - Ordering Supplies

- If ordering reserve supplies, to be prepared for an epidemic - use AR of 0.2%
- If ordering supplies at beginning of an epidemic
 - for a large population, use AR of 0.2%
 - for a rural population of < 5,000, use AR of 2%
- If ordering supplies during a prolonged epidemic, use the ARs calculated during that epidemic